

SOUTHERN SOUTHEAST HERRING SPAWN-ON-KELP POUND FISHERY

2004 MANAGEMENT PLAN



By

Ketchikan and Petersburg Commercial Fisheries Management Staff

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INTRODUCTION

This plan provides an overview of the management approach and regulations for the 2004 spawn-on-kelp pound fisheries on the west coast of Prince of Wales Island near the communities of Craig and Klawock and in Ernest Sound in District 7, south of Wrangell in Southeast Alaska. The Ernest Sound spawn-on-kelp fishery is a new fishery adopted by the Alaska Board of Fisheries in January 2003. Staff biologists listed at the end of this document are available to answer questions regarding this plan. Pound operators are also advised to review the section of this plan that describes requirements of other agencies.

A closed pound fishery involves releasing sexually mature herring into a net impoundment in which kelp is suspended. The herring are released from the pound after they spawn on the kelp, and the kelp with eggs are then sold. An open pound has suspended kelp attached to the floating structure, but does not impound herring. The floating structure and kelp are placed in areas of active herring spawn.

In both of the southern Southeast Alaska herring spawn-on-kelp fisheries, a closed or an open pound may be operated by a single Commercial Fisheries Entry Commission (CFEC) permit holder, or a pound may be operated by two or more CFEC permit holders. To reduce the amount of gear on the fishing grounds and handling of herring the department has provided an incentive to multiple permit pound operators by giving them a larger allocation of *Macrocystis* blades or fronds.

The Alaska Board of Fisheries met in Sitka in January 2003 and modified the existing regulations for the herring spawn-on-kelp fishery in Section 3-B Craig-Klawock), and created a new herring spawn-on-kelp fishery in District 7 (Ernest Sound). The District 7 fishery will be considered as part of the Southern Southeast spawn-on-kelp limited entry fishery.

The Board of Fisheries recognized that managing new fisheries placed new responsibilities on the Department of Fish and Game that requires additional funding and staff effort. The Department advised stakeholders and the Board that with no new funding the likelihood of implementing this new fishery was problematic. As of this writing, the Department is seeking bids from fishermen to conduct spawn-on-kelp test fisheries to generate revenue to fund management related activities associated with the southern southeast spawn-on-kelp fisheries. Details of these test fisheries were outlined in news releases dated January 30, 2004, and the deadline for bids is 12:00 noon, Tuesday, February 17, 2004.

Department biologists listed at the end of this document are available to answer questions concerning this management plan. Pound fishery participants are also encouraged to carefully review the section of this plan containing requirements of other agencies.

HERRING STOCK STATUS AND HISTORIC FISHERY PERFORMANCE

Craig-Klawock (District 3)

Winter food and bait herring fisheries have occurred in District 3 (Meares Passage and in the Bocas de Finas area) since the 1960s. Seasonal landings from the 1960s through 1985 were small, averaging approximately 210 tons. From 1987–1991, the herring population grew dramatically in Section 3-B with annual guideline harvest levels (GHL) averaging approximately 2,220 tons (Table 1). The herring population has declined in abundance since 1992 with an average GHL of 700 tons. This will be the 13th year that the Craig/Klawock herring spawn-on-kelp fishery has occurred. Fishing effort, harvest, spawning, and fishery dates, and product values are summarized in Table 2.

The estimated size of the Craig/Klawock herring population is based upon an age structured analysis (ASA) model. This model incorporates information on spawning biomass and escapement in prior years, annual mortality, growth, fecundity, and recruitment.

Annual harvest levels are based on a graduated scale that allows for higher harvest rates as the herring population increases relative to the threshold level (Figure 1). The established threshold level for the Craig/Klawock stock is 5,000 tons. No harvest is allowed if the biomass estimate for the stock is less than the threshold level. The harvest rate is allowed to increase from 10% at the threshold level to a maximum of 20%. The 2004 forecast for the Craig area is 13,204 tons. The allowable 13.3% harvest rate will allow a combined quota of 1,754 tons for the bait and the SOK fisheries. The biomass based on the ASA model increased dramatically in 2003. This increase in estimated spawn deposition and biomass was associated with a high percentage (39%) of age 3 recruits.

The Board of Fisheries in January of 1997 increased the allocation of herring to the Craig/Klawock spawn-on-kelp pound fishery from an 85/15 allocation between the winter bait fishery and the spring pound fishery to an allocation of 60/40. Therefore, for the 2004 season, **the guideline harvest level will be 702 tons for the spawn-on-kelp fishery.** The 2003-2004 bait fisheries Guideline Harvest Level is 1,052 tons. Any unharvested herring in the bait fisheries will be allocated to the spawn-on-kelp fishery. It is expected that the winter bait fishery will harvest approximately 200 tons of herring. The department does not anticipate any harvest in the bait pound fishery. If that level of harvest in the winter bait fishery occurs it is possible that the spawn-on-kelp fishery will be allocated approximately 1,500 tons of herring. The winter bait fishery closes on February 28, 2004. At that time, the final GHL for the spawn-on-kelp fishery will be announced.

Herring spawning normally occurs in the Craig/Klawock area in mid to late March or early April. The earliest observed spawn since the mid-1970s was March 9 and the latest date of initial spawning has occurred as late as April 3. Traditionally, herring spawn on Fish Egg, Wadleigh, Clam, and Abess Islands. However, spawning has also been recorded in the area of Portillo Channel, Port Real Marina, the northern shore of San Fernando Island, the

Blanquizal Island area, and along the Prince of Wales Island shore at San Christoval Channel and Shinaku Inlet. Figure 2 shows the open area for the Craig/Klawock spawn-on-kelp fishery.

Ernest Sound (District 7)

Winter food and bait herring fisheries have occurred intermittently in District 7 at Deer Island and other locations since 1969. The major fishery in the district was always at Deer Island and it occurred throughout the 1970's with average season landings of around 500 tons. The fishery was then closed until the 1992-93 season. From 1992-93 until 1998-99, the fishery was open 5 seasons and then closed until this year. Since the 1992-93 season, less than 25% of the available GHF has been taken on the average with average season landings of 88 tons. This will be the first year that the Ernest Sound herring spawn-on-kelp fishery has occurred. Fishing effort, harvest, spawning, and fishery dates, are summarized in Table 3.

The estimated size of the Ernest Sound herring population is based upon an age structured biomass accounting that relies heavily upon spawn deposition.

Annual harvest levels are based on a graduated scale that allows for higher harvest rates as the herring population increases relative to the threshold level (Figure 1). The established threshold level for the Ernest Sound stock is 2,500 tons. No harvest is allowed if the biomass estimate for the stock is less than the threshold level. The harvest rate is allowed to increase from 10% at the threshold level to a maximum of 20%. The 2004 forecast for Ernest Sound is 6,592 tons. The allowable 13.3% harvest rate will allow a combined quota of 875 tons for the bait and spawn-on-kelp fisheries. Spawn deposition increased in 2003. This increase in estimated spawn deposition and biomass was associated with a high percentage (62%) of age 4 herring that includes a large percentage of herring spawning for the first time.

The Board of Fisheries created the Ernest Sound spawn-on-kelp pound fishery in January of 2003. The fishery is similar to several other herring fisheries in that it is based upon the portion of the GHF that is remaining after the herring bait fisheries occur. The Board also created a herring bait pound fishery that is allocated 10% of the GHF. The 2003-2004 winter food and bait fishery guideline harvest level is 785 tons and the herring bait pound fishery is 90 tons. Any unharvested herring in the winter bait fishery and any unallocated herring from the bait pound fishery after March 15 will be allocated to the spawn-on-kelp fishery. At that time the final GHF for the spawn-on-kelp fishery will be announced. It is expected that the winter bait fishery will harvest between 150 and 250 tons. The winter bait fishery closes on February 28, 2004.

Herring spawning normally occurs in Ernest Sound in early to mid April. The earliest observed spawn since 1991 was April 5 and the latest date of initial spawning was April 26. Traditionally, herring spawn along the Cleveland Peninsula shoreline between Union Bay and Emerald Bay. However, spawning has also been recorded north of Point Eaton and south to

Ship Island (Figure 3). Figure 4 shows the open area for the Ernest Sound spawn-on-kelp fishery.

CALENDAR OF EVENTS

The following is a calendar of events for the 2004 fishing season:

March 3 – The department will issue a news release announcing the actual harvest of the bait herring fisheries and kelp allocation for Craig/Klawock.

March 16 — The department will issue a news release announcing the actual harvest of the bait herring fisheries and kelp allocation for Ernest Sound. The Department will also announce the status of test fishery bids at that time.

March 17 – Kelp permits will be available.

March 17 – The Craig/Klawock pound area will be open to seining of herring effective 12:00 noon.

April 1 – The Ernest Sound pound area will be open to seining of herring effective 12:00 noon.

May 31 – Pounds must be completely removed from the waters of the herring pound fishing area. This includes the area covered by extreme high tide.

REGULATIONS

The Alaska Board of Fisheries met in Sitka in January 2003 and modified the existing regulations for the Section 3-B herring spawn-on-kelp fishery and created the Ernest Sound herring spawn-on-kelp fishery. The management plan can be found in the 2003-2004 Commercial Herring Fishing Regulation book under **5 AAC 27.185 MANAGEMENT PLAN FOR HERRING SPAWN ON KELP IN POUNDS IN SOUTHEASTERN ALASKA AREA.**

The kelp allocation tables for the two Southern Southeast Alaska spawn-on-kelp fisheries may be found under **5 AAC 27.185 MANAGEMENT PLAN FOR HERRING SPAWN ON KELP IN POUNDS IN SOUTHEASTERN ALASKA AREA** but are summarized here:

In Section 3-B, the kelp allocation is as follows:

Guideline Harvest Range for Herring (tons)	Single Permit Closed Pounds	Double-Permit Closed Pounds	Triple-Permit Closed Pounds	Single Permit Open Pounds	Multiple Permit Open Pounds
200 – 599	200 blades	400 blades	550 blades	100 fronds or 1,000 blades	300 fronds or 3,000 blades
600 – 799	250 blades	450 blades	675 blades	150 fronds or 1,500 blades	450 fronds or 4,500 blades
800 – 999	300 blades	600 blades	900 blades	200 fronds or 2,000 blades	600 fronds or 6,000 blades
1, 000 or more	350 blades	750 blades	1,125 blades	250 fronds or 2,500 blades	750 fronds or 7,500 blades

In District 7, the kelp allocation is as follows:

Guideline Harvest Range for Herring (tons)	Single Permit Closed Pounds	Double-Permit Closed Pounds	Triple-Permit Closed Pounds	Single Permit Open Pounds	Multiple Permit Open Pounds
50-99	None	None	None	100 fronds or 1,000 blades	300 fronds or 3,000 blades
100-299	200 blades	400 blades	500 blades	150 fronds or 1,500 blades	450 fronds or 4,500 blades
300-499	300 blades	500 blades	500 blades	200 fronds or 2,000 blades	600 fronds or 6,000 blades
500-699	400 blades	500 blades	500 blades	250 fronds or 2,500 blades	750 fronds or 7,500 blades
700 or more	1000 blades	1,000 blades	1,000 blades	250 fronds or 2,500 blades	750 fronds or 7,500 blades

Other general regulations are summarized here; fishers are advised to familiarize themselves with the complete regulatory framework for these fisheries before commencing fishing operations.

- After the last herring has been placed into the pounds, two pounds of two or more CFEC permit holders may drop a wall of their respective pounds to allow herring to swim between two connected pounds. The CFEC permit holders must notify the department representative prior to joining their pounds. Additional herring may not be placed into the pounds once the two of them are joined.
- If two pounds are joined the regulation that allows for retention of herring for six days will be enforced on the pound which first had herring placed into the structure. Only two pounds can be joined together.
- For the purpose of this fishery, a closed pound is considered to be fishing once herring have been introduced into the closed pound structure; a closed pound is considered to have stopped fishing once all of the herring have been released and all of the spawn-on-kelp product has been removed from the closed pound structure.
- For the purpose of this fishery, an open pound is considered to be fishing once kelp has been attached to the open pound structure; an open pound is considered to have stopped fishing once all of the spawn-on-kelp product has been removed from the open pound structure.

The department has received inquiries from permit holders wanting to transport pound structures immediately after fishing from one regulatory area to another in order to participate in two fishery locations without the added expense of a second pound structure. Regulation 5 AAC 27.185 (t), however, requires that "...the person must maintain the pound and webbing in place for at least four weeks. To optimize hatching success the person must position egg-covered webbing in its original configuration with adequate water circulation on all sides." Fishermen are reminded that this regulation remains in effect. After consideration of the regulatory intent "to optimize hatching success" the department and FWP would allow transport of the pound structure to another area provided that the egg-covered webbing: 1) remains anchored in the original area, 2) is supported in its original configuration, and 3) is marked according to 5 AAC 27.185 (k) with the first and last name and the five-digit CFEC number of the permit holder clearly marked. To be considered as "supported in its original configuration" and in compliance with this regulation, the permit holder must both support the net at the surface with adequate floatation and separate the sidewalls of the net so there is "adequate water circulation on all sides." Since these requirements could be met with buoy bags or other material for floatation, and pipe or other rigid material to separate the sidewalls, the department will provide for a fishery-wide experimental gear permit (under the authority of AS 16.05.050(10)) for the 2004 season exempting permit holders in the Southern Southeast Alaska herring spawn-on-kelp fisheries from the requirement that the pound structure will be left in place provided that all other provisions of 5 AAC 27.185 (t) and (k) still remain in

effect. Since the department will maintain a copy of this permit on file for all individual permit holders individual permit do not need to apply or have such permits on their possession.

EXPERIMENTAL GEAR PERMITS

A proposal was presented to the Alaska Board of Fisheries in 2003 to modify closed pound gear from the present requirement of 400 square feet at the surface and a maximum depth of 30 feet. The proposal had requested maintaining the same 12,000 cubic foot net volume, but by using a shallower net with a greater surface area. This proposal was not adopted due to insufficient supporting information, the general need to have standardized gear for an orderly fishery, and the need to limit the harvest of herring. The department indicated to the Board that it would continue to work on development of gear through the experimental gear permit option as authorized under AS 16.05.050(10). As a follow-up two, non-standard pound net configurations were authorized on an experimental basis in 2003 for the Hoonah Sound fishery. One net was 20x30x20-foot deep, one was 20x40x15-foot deep, and both were 12,000 cubic foot in volume. Results from the 2003 study indicated that the experimental pounds were associated with greater total poundage and greater proportion of product graded as Jumbo. Results from the 2003 study are as follows:

Production from 500 Blades in Double Closed Pounds			
Pound Type	20x40x15	20x30x20	20x20x30
Number Fishing	2	2	92
Avg Lbs SOK/fisher	3,997	4,545	2,556
Jumbo %	69	64	29
#1 Grade %	17	8	36
#2 Grade %	2	1	18

Although these results are encouraging, greater product quality and quantity during the experimental fishery cannot entirely be attributed to the different gear configuration. The operators of experimental pounds in 2003 have pointed out that several measures were taken to increase production and quality. Some of these measures may already be in general use during the fishery, but some do represent new innovations which are worth considering: 1) pound nets were shaped with internal frames to provide the full net volume, 2) kelp height in the pound was adjusted to the depth of active spawning by testing with a weighted string, 3) fishing was conducted when herring were fully mature, 4) small top-off sets were added over a 2-3 day

period, then, after fishing, spawned-out herring nearer the surface were periodically released over several days, 5) herring density in the net was limited to a conservative amount since spawning is retarded by excessive crowding, 6) web depth adjustments were made to provide good water exchange, and 7) working in a smaller group provided adequate time for tending the pound.

The department has received requests for experimental gear permits to fish alternate pound net configurations in 2004. The department is committed to working with the industry to evaluate the option of changing the gear allowed by regulation through the Board of Fisheries process. To provide for this option, the department is requesting that pound fishermen contact any Fish and Game area office at the contact numbers listed at the end of this management plan. Permits will be issued once fishermen provide their name, phone number and mailing addresses of permit holders in their group who would operate experimental gear, and the length, width, depth and volume of the net. **Requests will only be considered until March 1, 2004.** Experimental Permits will be mailed out to applicants on a weekly basis as they are received. Permits must be signed by each permit holder and the commissioner's designee and must be carried by the permit holder while fishing to be valid. No permits will be issued for net volumes greater than 12,000 cubic feet. The department recommends a significant portion of each larger group, and of the overall fishery, should continue to operate standard 20x20x30 foot-deep nets to provide for a good comparison between gear types following the 2004 season. The department plans to check the depth of nets holding herring by using a weight and string to ensure compliance with net volume limits. Information concerning violations will be provided to the Bureau of Fish and Wildlife Protection for citation. In the event the violation of net depths is not enforceable then the department would not recommend a change from current regulations, and is not obligated to continue issuing experimental gear permits beyond the current season. The department will not request post-season reports on the permit since this study can be completed by the evaluation of fish ticket information.

LIMITED ENTRY

In 1998, the Commercial Fisheries Entry Commission placed all Southeast Alaska's herring spawn-on-kelp pound fisheries under limited entry. For the Craig/Klawock and Ernest Sound fisheries 229 permits were issued. Questions regarding eligibility for this fishery should be directed at the Alaska Commercial Fisheries Entry Commission.

KELP HARVEST AND ALLOCATION

According to **5 AAC 37.100 PERMITS** a permit is required to harvest kelp to be used in the pounds. Kelp permits may be pooled and one or more individuals can harvest for a group of pound operators. Kelp permits may be obtained from the department's offices in Ketchikan, Craig, Petersburg or Wrangell and must be completed and returned to the department by May 15, 2004.

The department will manage the fishery based on a division of kelp blades or fronds between permit holders. The department recognizes that kelp management alone has not been effective in limiting the harvest of herring and staying within the herring GHL set for the fishery. The department has attempted to rectify this problem by allowing the use of multiple-permit pounds thereby reducing the numbers of pounds on the grounds. This should lead to the reduction in the harvesting, impounding, and the associated mortality of herring. The department's method of encouraging multiple permit pounds and open pounds has been a kelp incentive, that is allowing a greater number of kelp blades per permit holder for multiple permit pounds and open pounds.

The amount of kelp for the various types of pounds is now defined in the new management plan. Permit holders can now determine their kelp allocation by looking at the kelp allocation table in the management plan. When the permit holder decides what type of pound they want to use they can determine the amount of kelp blades or fronds they can use in the fishery.

FISHERY CONDUCT AND MANAGEMENT

Suitable sites for pounds in the Craig/Klawock and Ernest Sound area are limited. To avoid herring mortality and damage to the pounds, operators should locate their pounds in an area with minimal exposure to wind and wave action, and with a relatively deep bottom. The distance from where the herring are captured and the pound site should also be considered since long towing distances can cause considerable stress and mortality of herring.

In past years, a completed closed pound had to be on the grounds by mid-March in order for the permit holder to participate in the Craig/Klawock fishery. For the 2004 season, there will not be a deadline when pounds have to be placed on the grounds at either Craig/Klawock or Ernest Sound. Pounds must be operational by the time herring and kelp are introduced.

All permit holders involved in the operation of a pound, whether single or multiple permit pound, must be physically present at their pound fishing site at all times during the *operation of the pound*. *Operation of the pound* is defined as 1) the placement of kelp into the pound structure, 2) the capture and transfer of herring into the pound, 3) the collection and sale of

herring spawn-on-kelp product produced in the pound, and 4) all permit holders should be present when two pounds are put together.

For multiple permit closed pounds, all permit holders assigned to the pound must be present at their pound site when kelp and herring are introduced into the pound. If only one permit holder is present at this time then that pound must be operated for the remainder of the season as a single permit closed pound and no more than the number of blades of kelp allocated to a single closed pound may be harvested.

The department will be closely monitoring herring activity in the Craig/Klawock area by vessel and aerial surveys. Kelp permits will be available starting Wednesday, March 17, 2004. **Herring for placement in closed pounds may be captured starting at 12:00 noon on March 17 in Section 3-B.** Daily fishing periods will be announced on the fishing grounds. The department will give sufficient notice of the open fishing time so that all fishers are given a fair opportunity to capture herring. Limiting seining to daylight hours may be necessary to control the amount of herring available for harvest and reduce the amount of improper handling of herring that may occur during nighttime seine operations. The department recommends that the size of the sets should be small with no more than 10 tons of herring harvested at one time.

The department will be closely monitoring herring activity in the Ernest Sound area by vessel and aerial surveys. Results of aerial surveys will be announced by recorded message at 907-772-3700 or by department news release if observations have a significant bearing on when fishing activity should begin. Kelp permits will be available starting Wednesday, March 17, 2004. **Permit holders may begin catching and transferring herring at any time after 12:01 a.m., April 1, 2004, until closed by emergency order.** If it appears spawning will occur earlier than this date, the fishery may be opened earlier to avoid loss of the fishery.

The department will probably station a vessel on the grounds in Ernest Sound when herring are available for capture. Department personnel will closely monitor all phases of the fishery to assure compliance with regulations. All fishery announcements, including updates of herring activities and fishery openings/closures, will be broadcast by VHF radio, channel 10, on the fishing grounds.

Pound operators are advised to use extreme caution when towing herring from the capture site to the pound site since towing can be a source of significant mortality if not conducted properly. To avoid mortality, the transport of herring to the pound site must be done with the pound itself or a towable net pen. Towable net pens used only for transporting herring must be marked "Tow Pound." **Transporting herring with a purse seine is discouraged due to increased mortality with the captured herring.** Pound operators are also advised to **push** pounds or to tow alongside of the transfer pound to avoid crushing herring against the net in the prop wash.

Pound operators may change the type of pound they are using up to the time herring or kelp is introduced into the pound. They must inform the department of the change.

All fishery announcements, including updates of herring activities and fishery openings, will be broadcast by VHF radio, Channel 10. Fishers are strongly encouraged to have a VHF radio.

In 2004, the department will more closely monitor the practice of **“top off fishing.”** This practice has been successfully used to stimulate new spawning in pounds and therefore to produce better spawn on kelp quality and quantity. The department has a concern, based on observations during the 2003 season, that the practice of “top off fishing” is being abused by some fishermen. Regulations allow herring additions through the fourth day from when herring are first added to a pound, but neither kelp nor herring may be added to a pound after herring has been released or product has been harvested (5 AAC 27.185(q)). Herring may be retained in a pound for a maximum of six days from the day first placed into a pound and then must be released (5 AAC 27.185(s)). These two regulations are fundamental to the health of the herring spawning stocks and, along with gear size and kelp allocation limits, provide for sustainable use by limiting the harvest of herring by the fishery. **Fishermen must take responsibility to ensure that when adding herring to a pound that herring are not at the same time swimming out of the pound thereby exchanging spawned-out herring with fresh herring and harvesting more than one pound net full of herring during a season.** If any such cases are observed or reported in 2004, then the department will turn such cases over to the Bureau of Fish and Wildlife Protection for citation. Additionally, the department will consider closure of the fishery to all further fishing by emergency order or limiting fishing to specific daylight hours only. Should the latter two measures become necessary, then such measures may have the unwanted consequence of preventing some permit holders from the capture of herring that season. The department is requesting the assistance of permit holders to ensure that additions of “top off fishing” are only conducted in compliance with regulations and that violations are reported.

Although the department has determined a limitation on the number of kelp blades that can be harvested and placed in each permit holder’s pound, fishers are encouraged to fish the number of blades which will maximize the overall quality and value of their product rather than simply to fish the total amount allowed by the department.

The department has received numerous inquiries from pounders planning on participating in the Craig pound fishery, the Ernest Sound fishery and the pound fisheries in northern Southeast Alaska. Spawning dates between the Craig and Ernest Sound stocks have historically been separate enough to allow permit holders to fish both areas in almost all years. However, during some years spawning has been close enough together to create some challenges for those permit holders planning on fishing in both areas. Pounders are advised that only one unit of gear or one pound may be fished by a permit holder at any given time. The Board of Fisheries provided regulatory language defining when a pound is fishing and when it is not (see “REGULATIONS” section of this document). Fishermen are also reminded that the permit holder must be physically present at the pound site at all times during operation of the pound as defined in Sections (o) and (p) of 5 AAC 27.185 MANAGEMENT PLAN FOR HERRING SPAWN ON KELP POUNDS IN SOUTHEASTERN ALASKA AREA. For permit holders planning on fishing in Ernest Sound and Hoonah Sound, during some years spawning has been

close enough together to create some challenges for those permit holders planning on fishing in both areas. Since northern and southern Southeast Alaska have different limited entry permits a permit holder could have gear in the water in both areas but a permit holder still must be physically present at certain times as defined in 5 AAC 27.185.

HARVEST AND PRODUCTION

Each permit holder's spawn-on-kelp blades must remain separate from other permit holder's spawn-on-kelp blades until after processing and grading is completed. Permit holders will be allowed to harvest all spawn-on-kelp product produced in their pounds. A permit holder's fish ticket must report only the spawn-on-kelp harvested from his/her own pound. Each permit holder fishing a jointly operated pound shall be issued a fish ticket and the **sum** of the weights of those tickets shall equal the total weight of product produced in the jointly operated pound. All pounders and any vessel carrying unlanded and unprocessed spawn-on-kelp product from the fishing grounds, must first contact the department and hail the estimated amount of spawn-on-kelp product harvested and indicate the intended time and location where a landing will occur. For any product that has been landed on the grounds to a licensed processor, the processor (not the pounders) will be required to hail the department with delivery weight for each landing on board.

REQUIREMENTS FOR BUYERS

Buyers, permit holders, and processors of spawn on kelp product should read and become familiar with the requirements for the reporting of kelp product. These requirements can be found in **5 AAC 27.187 BUYER AND PROCESSORS REPORTING REQUIREMENTS FOR SPAWN ON KELP IN POUNDS FOR THE SOUTHEASTERN ALASKA AREA.**

Operators of floating processing vessels will be required to report in person or by telephone, to the Alaska Department of Fish and Game office in Ketchikan before the start of processing operations in the Craig/Klawock fishery. Operators of floating processing vessels, tender vessels, and catcher-processors will be required to report in person, by VHF radio, or by telephone, to the Department of Fish and Game office in Petersburg or directly to department area management biologists on the grounds before the start of processing operations in Ernest Sound. These reporting requirements are specified by regulation **5 AAC 39.130 and persons involved in these fisheries should pay special attention to (f) and (g).**

LICENSE REQUIREMENTS

Operators must obtain a 2004 entry permit (L21C) from the CFEC. Individuals who do not have CFEC permit, but are assisting in the operation of the fishery in any manner, must have a 2004 crewmember license. All commercial vessels used in the fishery (including skiffs) are required to have a 2004 vessel license with the CFEC. Fishers are required to display the permanent vessel license plate (ADF&G number) on both sides of the hull, cabin, or mast in permanent symbols at least 12-inches high and with lines at least one-inch wide that contrast with the background.

Applications for vessel and CFEC permits are available from all offices of ADF&G or they can be obtained by writing the Commercial Fisheries Entry Commission, 8800 Glacier Hwy #109, Juneau, Alaska 99801-8079. **Fishers are reminded to apply for all licenses well in advance of the fishery.** Crew member licenses may be obtained from local vendors in most communities.

REQUIREMENTS OF OTHER AGENCIES

Prospective pound operators are advised to consider the requirements that other agencies may have to construct and operate pounds in the Craig/Klawock fishery and the Ernest Sound fishery. Pound operators are urged to contact the Alaska Department of Natural Resources (DNR) (907-465-3400), the U.S. Forest Service (907-826-3271), the National Marine Fisheries Service (NMFS) (907-747-6940), and the United States Coast Guard (907-228-0340) to determine other requirements or restrictions.

Department of Natural Resources

The Alaska Department of Natural Resources (907-465-3400) manages the use of tide and submerged lands seaward of mean high water.

U.S. Forest Service

In the Ernest Sound area, the U.S. Forest Service has jurisdiction over and manages most of the lands above mean high tide. People who plan to use National Forest land in connection with the fishery must apply for a special use permit from the Forest Service prior to any occupancy. Special use permit applications are available at the Wrangell Ranger District Office (907-874-2323). Examples of use needing a permit include (but not limited to): camping on National Forest land in conjunction with the commercial fishery, and storage of gear on the National Forest.

National Marine Fisheries Service

The National Marine Fisheries Service (907-772-2285) regulates activities that might harm marine mammals.

United States Coast Guard

Structures such as floating fish pens are subject to the requirements of the Code of Federal Regulations, Title 33, Part 64. This regulation requires an owner to apply for a Coast Guard permit and to install and maintain a light or other private aid to navigation if the Coast Guard determines it to be necessary to protect maritime navigation.

Herring pounds used in the spawn-on-kelp pound fishery do not require permits for private aids to navigation at this time, provided the owners:

1. Place two signs on opposite corners of the structure. These signs will be worded "Danger, Fish Pens" (Figure 6).
2. Place a single, all-points white light on one corner of structures less than 400 square feet in size.
3. Place a single, all-points white light on every corner of structures larger than 400 square feet in size.
4. Anchor fish pens within the boundary areas specified in ADF&G regulation 5 AAC 27.185 (f) (1) or (2).

If all these conditions are not met, the permit holder must apply to the Coast Guard for an individual "Private Aids to Navigation Permit." If you have questions, call the Coast Guard Aids to Navigation office, at 463-2245.

PRIVATE LANDS

Some of the area in which pounds may be operated is adjacent to privately owned lands. Pound operators should contact the landowners if they intend to use any of that land above mean high tide. Private land owners include the Klawock/Heenya Corporation, Shaan-Seet Corporation, and Sealaska Corporation. Figure 6 shows the approximate areas of privately held lands in the Craig/Klawock area.

Table 1. Craig/Klawock stock size and bait harvests, 1987–2003.

YEAR	MILES OF SPAWN (year)	BIOMASS (TONS)	BAIT QUOTA (TONS)	BAIT HARVEST (TONS)
87-88 ^a	5.0 ('87)	3,080	2,200	2,014
88-89	27.0 ('88)	16,350	1,810	1,730
89-90	31.7 ('89)	19,800	3,150	3,221
90-91	30.0 ('90)	18,350	2,841	3,272
91-92	22.0 ('91)	17,800	2,281	2,295
92-93 ^b	23.0 ('92)	12,350	1,362	629
93-94	8.4 ('93)	7,996 (ASA)	760	636
94-95	8.0 ('94)	6,778 (ASA)	617	124
95-96	5.5 ('95)	6,262 (ASA)	558	34
96-97	9.9 ('96)	6,755 (ASA)	615	517
97-98 ^c	13.2 ('97)	7,018 (ASA)	455	254
98-99	11.0 ('98)	6,951 (ASA)	450	254
00-01	12.9 ('00)	9,091 (ASA)	635	150
01-02	16.7 ('01)	8,387 (ASA)	571	100
02-03	18.4 ('02)	6,045 (ASA)	378	150
03-04	11.2 ('03)	13,204 (ASA)	700	N/A

^a Reduced to 1,600 tons on the grounds.

^b First year bait quota was split between pound fishery 85%:15%.

^c Herring allocation changed to 60% for the winter food and bait fishery, 40% to the pound fishery.

Table 2. Craig/Klawock herring roe-on-kelp fishery summaries, 1992–2003.

FISHERIES INFORMATION	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Herring quota (tons)	403	240	135	109	100	200 ^a	500 ^b	650 ^c	280 ^d	913 ⁱ	852	478
Product quota (tons)	32.3	19.2	10.8	8.7	8.0	8.0	40	52	22.4	N/A	N/A	N/A
Total harvest (tons)	25.7	5.7	16.5	25.4	37.25	23	22.4	36	0	27.2	35.3	70.5
Exvessel value	\$180,000	\$47,882	\$364,199	\$1,000,000	\$1,490,000	\$270,306	\$152,203	\$212,121	\$0	\$146,859	\$218,700	\$423,000
Aver. Price/pound	\$3.50	\$4.17	\$11.00	\$19.00	\$20.00	\$6.00	\$3.39	\$2.94	\$0	\$2.70	\$3.10	\$3.00
Aver. Income/landing	\$784.	\$2,081	\$4,388	\$5,107	\$9,700	\$1,890	\$1,072	\$2,060	\$0	\$2,880	\$2,460	\$3,385
Number of applicants	531	389	257	241	195	218	170	161	164	N/A	N/A	N/A
Number of pounds in fishery	248	209	147	159	162	119	112	70	50	31	50	61
Number of landings	229	23	83	146	154	143	148	103	0	51	89	118
Herring allocation (tons)	1.6	1.15	1	0.7	0.6	0.7	4.46	N/A	N/A	N/A	N/A	N/A
Blade quota (tons)	8.0	6.4	3.75	2.9	2.67	2.6	13	9.1	7.4	N/A	N/A	N/A
Blade allocation	310	292	233	174	156	^e	^f	^g	^h	^j	^j	^j
Total kelp harvest (tons)	7.8	3.7	3.0	3.0	2.6	3.2	3.47	2.9	2.0	3.2	8.2	N/A
Herring spawning dates	3/15 – 4/10	3/26 – 4/21	3/23-4/12	3/27-4/9	3/22-4/12	4/7-4/14	3/19-4/8	3/23-3/28	3/22-4/5	4/1-4/7	3/31– 4/7	3/31– 4/7
Miles of spawn	22.0 (‘91)	23.0 (‘92)	8.4 (‘93)	8.0 (‘94)	5.5 (‘95)	9.9 (‘96)	13.2 (‘97)	12.5 (‘98)	15.4 (‘99)	12.9 (‘00)	18.4	11.2
Stock biomass (tons)	17,800	12,350	7,996	6,778	6,262	6,755	7,018	6,951	6,013	9,591	8,387	6,045
Seining opened/closed	3/18 – 3/23	4/17 - 4/28	4/5-4/18	3/28-4/14	3/28-4/14	3/17-4/20	3/17-4/20	3/17-4/21	3/17-5/1	3/17-4/24	3/17 – 5/20	3/17-5/15

^a 100 tons added on to original pound GHL from unharvested winter food and bait herring fishery in Section 3-B.

^b 200 tons added on to original pound GHL from unharvested winter food and bait herring fishery in Section 3-B.

^c 350 tons added on to original pound GHL from unharvested winter food and bait herring fishery in Section 3-B.

^d 30 tons added onto original pound GHL from unharvested winter food and bait herring fishery in Section 3-B.

^e 100 blades for single-closed pound, 150 blades for multiple pound permit holder, and 300 blades for open pound permits.

^f 120 blades for a single closed pound, 180 blades for a multiple pound permit holder, 360 blades for single open pound, and 400 blades for a multiple permit open pound.

^g 155 blades for a single closed pound, 235 blades for a multiple pound permit holder, 470 blades for a single open pound, 520 blades for a multiple permit open pound.

^h 70 blades for a single closed pound, 210 for a multiple pound permit holder, 700 blades for a single open pound, 2,100 blades for a multiple permit open pound.

ⁱ 485 tons added on to the original pound GHL from the unharvested winter food and bait herring fishery in Section 3-B.

^j 200 blades - single closed pound, 600 blades – per permit holder multiple closed pound, 200 fronds or 2,000 blades – single open, 600 fronds or 6,000 blades for multiple permit open pound.

Table 3. Ernest Sound miles of herring spawn, stock size, and harvests, 1969-2003.

Season	**Date of first spawn	Nautical miles of spawn	Spawning Biomass (tons)*	Guideline Harvest Level (tons)	Bait harvest (tons)	Sac Roe Harvest	Remaining GHL	Minimum Threshold Level (tons)
1969-70		--		--	17	--		
1970-71		3			206	--		
1971-72		--	13,100		967	--		
1972-73		--	3,550		711	--		
1973-74		--	450		535	--		
1974-75		--	400		593	--		
1975-76		3	2,900	580	708	--		
1976-77		3	4,350	870	901	49		2,500
1977-78	5/3	--	3,035	455	340	--		2,500
1978-79	4/16	2.6	1,505	--	--	--	--	2,500
1979-80	5/2	4	255	--	--	--	--	2,500
1980-81		3.5	410	--	--	--	--	2,500
1981-82		--	160	--	--	--	--	2,500
1982-83		--	1,640	--	--	--	--	2,500
1983-84	4/11	--	1,000	--	--	--	--	2,500
1984-85		4.5	1,000	--	--	--	--	2,500
1985-86	-	--	1,000	--	--	--	--	2,500
1986-87		1	--	--	--	--	--	2,500
1987-88	4/21	2	--	--	--	--	--	2,500
1988-89	4/17	2.4	500	--	--	--	--	2,500
1989-90		2.1	1,000	--	--	--	--	2,500
1990-91		ns	3,000	--	--	--	--	2,500
1991-92	4/16	9.1	2,650	--	--	--	--	2,500
1992-93	4/23	9	684	200	8	--	192	2,500
1993-94	4/24	8.4	2,544	0	--	--	--	2,500
1994-95	4/23	6.5	2,744	255	111	--	144	2,500
1995-96	4/16	6.9	4,852	280	220	--	60	2,500
1996-97	4/16	0	-No survey-	577	6	--	571	2,500
1997-98	4/9	11	5,381	0	--	--	--	2,500
1998-99	4/5	2.4	No survey--	662	96	--	566	2,500
1999-00	4/8	9.1	894	0	--	--	--	2,500
2000-01	4/10	6.9	2,051	0	--	--	--	2,500
2001-02	4/15	4.8	2,407	0	--	--	--	2,500
2002-03	4/10	8.5	6,592	0		--		2,500
2003-04				875		--		2,500

*1970 through 1990 biomass estimates were based on hydro-acoustic surveys. 1991 through 2001 biomass estimates were calculated from spawn deposition estimates or biomass accounting calculations. 1973-74, 1974-75, 1976-77 also include harvests from Fools and Menefee Inlets 1975-76 & 1976-77 GHL's are based upon 20% of the acoustical estimate. 1977-78 GHL is based upon 15% of the acoustical estimate (11/28/77 memo by WB. 1996-97 No survey, fish all spawned (7.5 miles) along Ship Island, 1998-99 No survey, only 2.4 miles of spawn observed, probably missed main spawn, 2003-04 Quota includes 90 tons for the bait pound fishery which reverts to the spawn on kelp fishery if no active pound fisheries by March 15.

2003-04 Spawn on kelp fishery is based upon whatever is left over from winter bait and bait pound fisheries. During 2003-04 it is expected that the winter bait harvest will be between 150 and 250 tons

** Since 1997-98 the first spawn and the major spawn have been within 4 days of each other

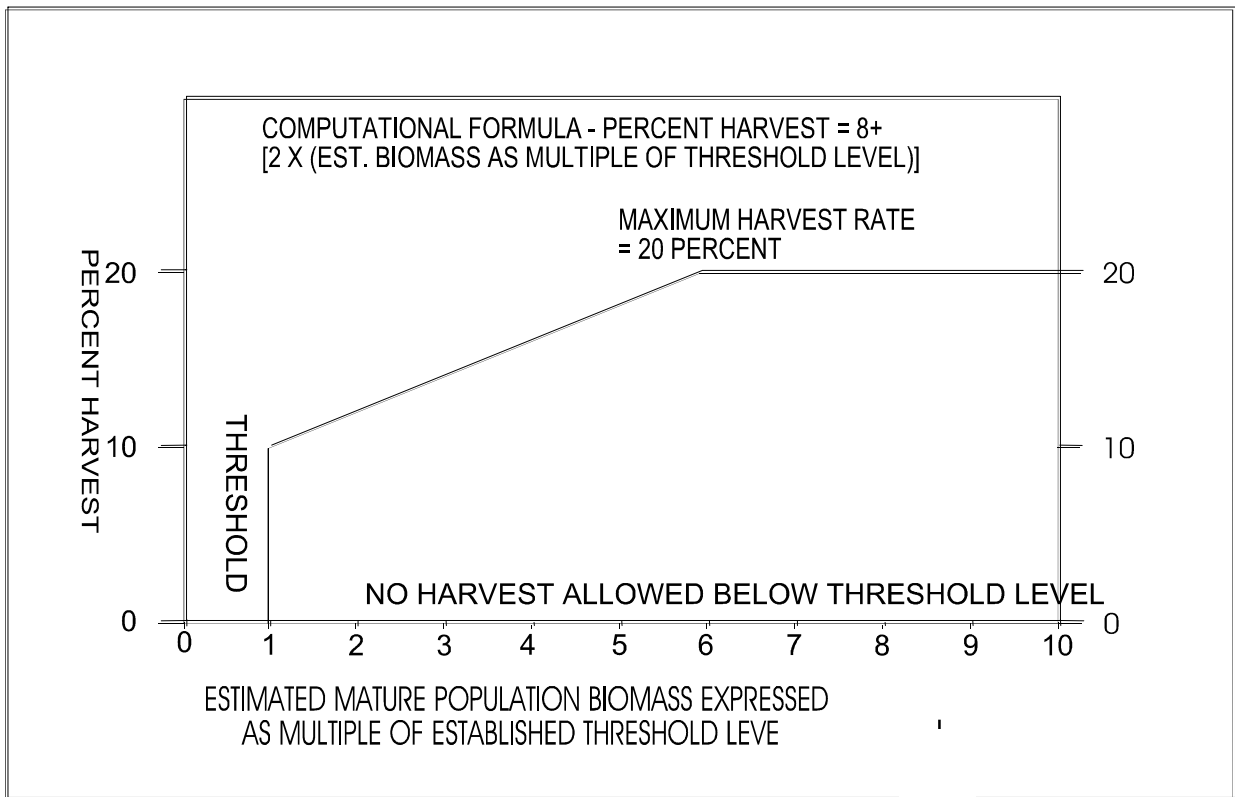


Figure 1. Generalized harvest strategy for Southeast Alaska herring stocks showing allowable percent annual harvest related to estimated biomass of mature stock expressed as a multiple of the established harvest threshold level.

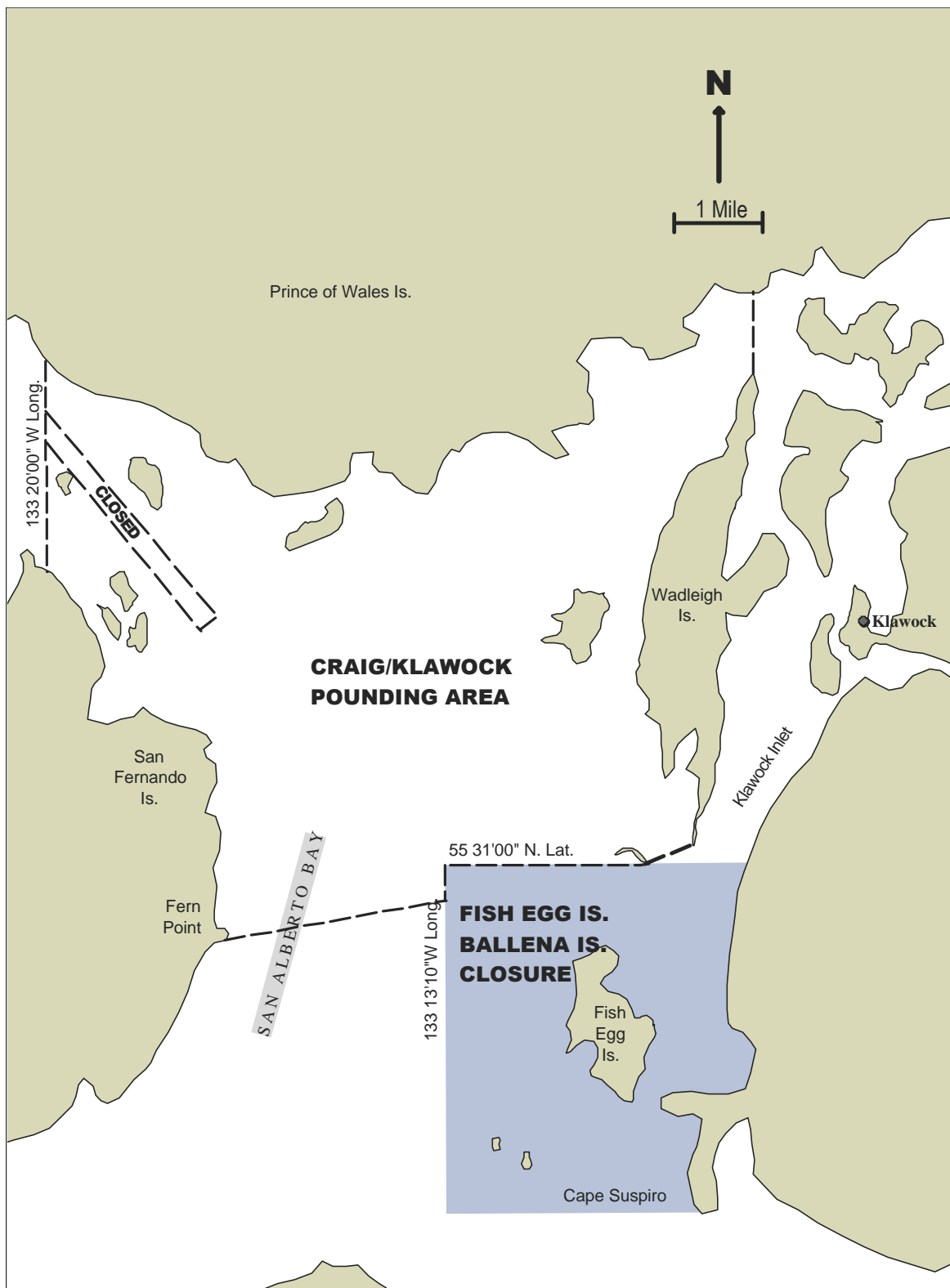


Figure 2. Open area for Craig/Klawock pound fishery.

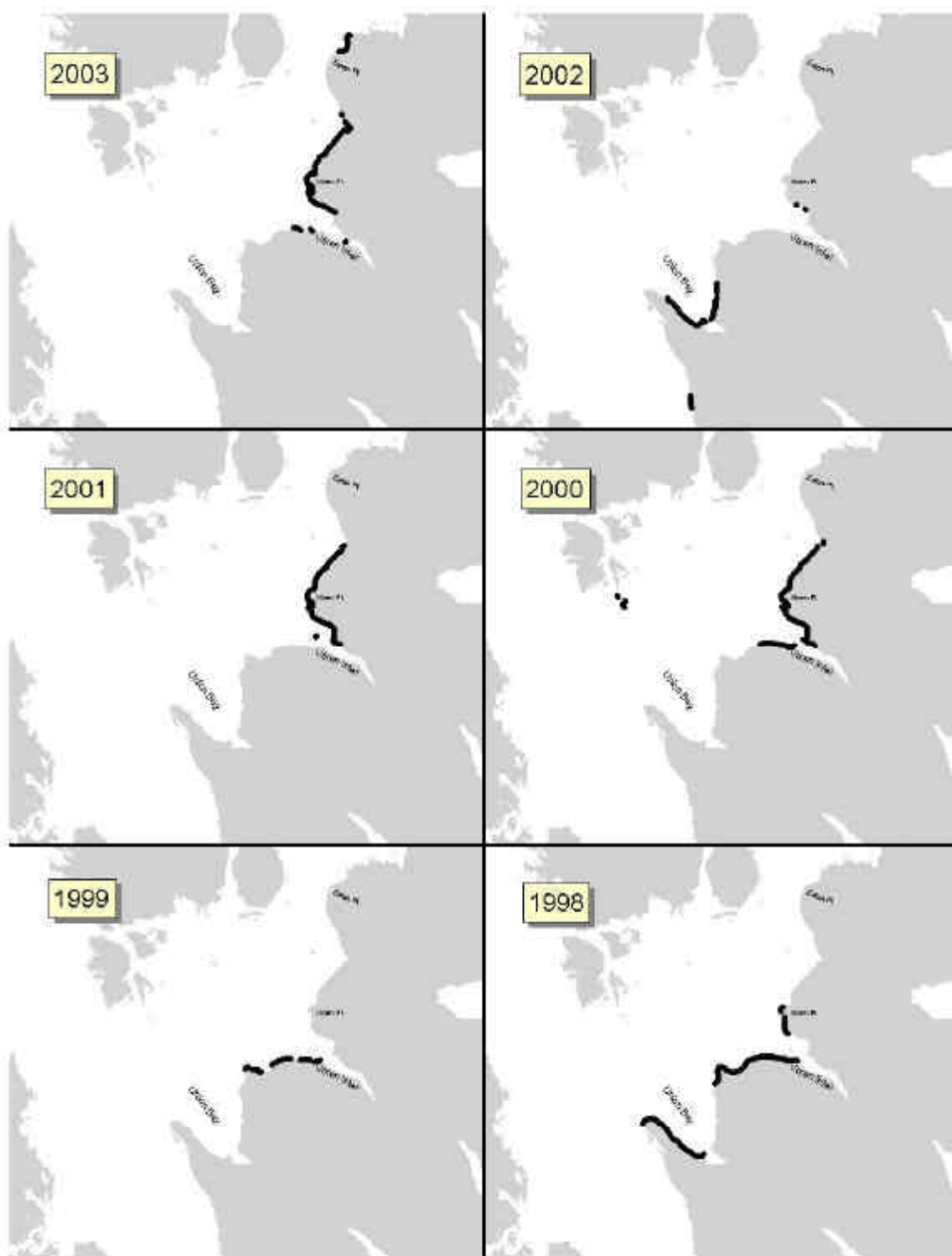


Figure 3. Herring spawn deposition in District 7 1998-2003.



Figure 4. Open area for the District 7 pound fishery (lined area is open fishing area).

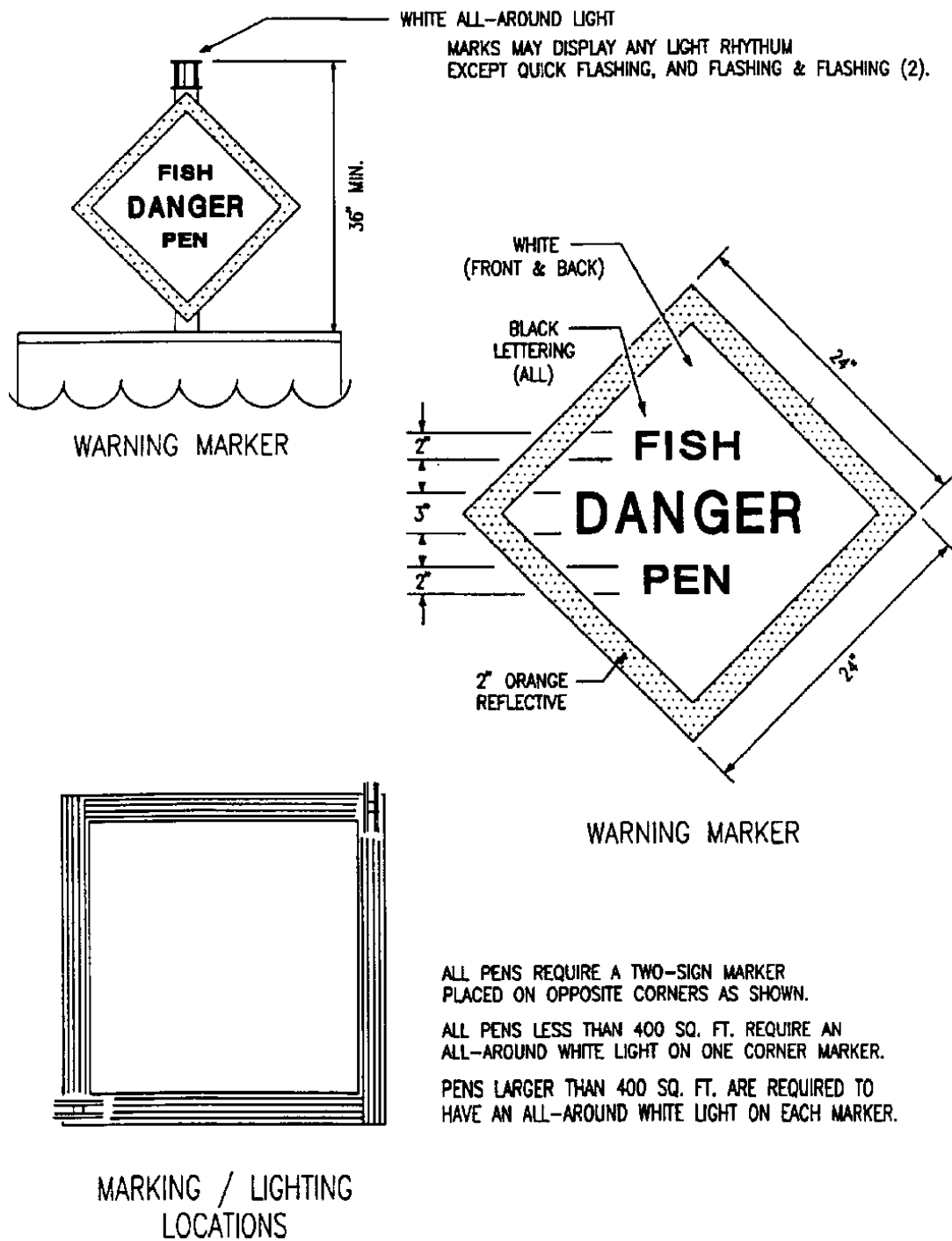


Figure 5. Coast Guard requirements for marking pounds.

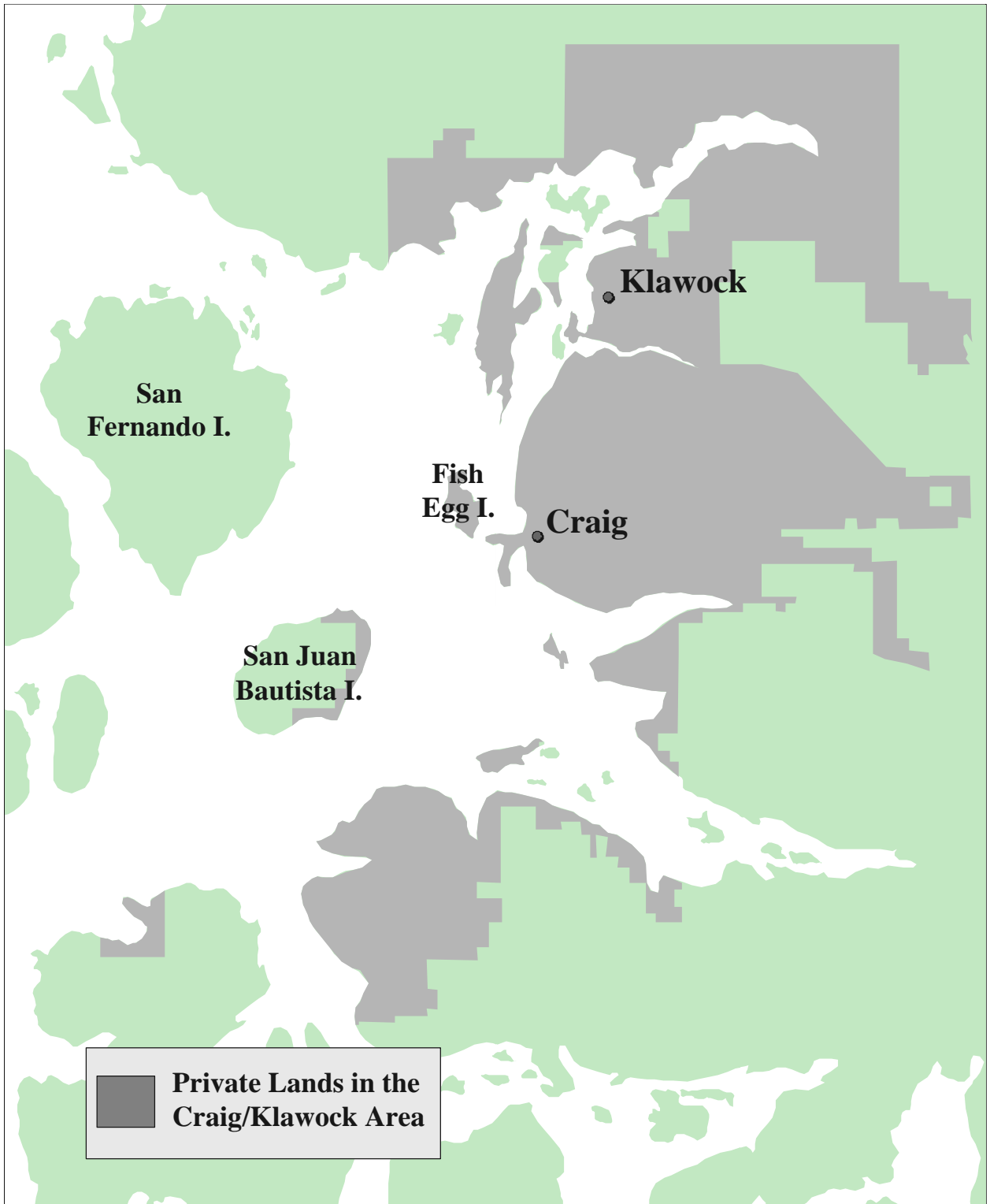


Figure 6. Private lands in the Craig/Klawock area.

LIST OF MANAGEMENT CONTACTS

Following are Division of Commercial Fisheries contacts regarding this management plan:

Andy McGregor – Region I Supervisor	P.O. Box 240020 Douglas, Alaska 99824 (907) 465-4250
Scott Kelley – Region I Management Biologist	P.O. Box 240020 Douglas, Alaska 99824 (907) 465-4250
Kevin Monagle – Area Management Biologist Dave Harris – Asst. Area Management Biologist	P.O. Box 240020 Douglas, Alaska 99824 (907) 465-4250
Marc Pritchett – Herring Research Biologist	P.O. Box 240020, Douglas, Alaska 99824 (907) 465-4250
William Bergmann – Area Management Biologist Troy Thynes --Asst. Area Management Biologist	P.O. Box 667 Petersburg, Alaska 99833 (907) 772-3801
Phil Doherty – Area Management Biologist Don House – Asst. Area Management Biologist Justin Breese – Asst. Area Management Biologist	2030 Sea Level Dr., Suite 205 Ketchikan, Alaska 99901 (907) 225-5195
Scott Forbes – Asst. Area Management Biologist	P.O. Box 200 Wrangell, Alaska 99929 (907) 874-3822
Bill Davidson – Area Management Biologist Dave Gordon – Asst. Area Management Biologist	304 Lake Street, Room 103 Sitka, Alaska 99835 (907) 747-6688

During the herring spawn-on-kelp pound fishery information may also be obtained from the Fish and Game Office in Craig, Alaska, located at Suite 302 Westwind Plaza, telephone number 1-907-826-2563.

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